

SUMMARY OF THE DRAFT INSTREAM FLOW RULES

November 16, 2000

Paul M. Currier, PE

New Hampshire Department of
Environmental Services

Why Protect Instream Flow?

- Riverine ecosystems are adapted to natural hydrograph characteristics
 - Life cycles of aquatic organisms
 - Low flows are stressful periods
 - Impacts of human consumptive use are greatest during low river flow conditions
- RSA 483 directs DES to adopt rules for protection of instream flow

RSA 483:9-c.I

The commissioner... shall adopt rules ... specifying the standards, criteria, and procedures by which a protected instream flow shall be established and enforced for each designated river or segment.

RSA 483:9-c.IV

The protected instream flow levels established under this section shall be maintained at all times, except when inflow is less than the protected instream flow level as a result of natural causes...

Background

- RSA 483 enacted by Legislature in 1988
 - In Response to increased and competing demands on Rivers
 - Modeled after federal Wild & Scenic Rivers
 - Protects free-flowing rivers
- Protection measures added in 1990
 - Instream flow one of the key protections
 - Others include water quality, setbacks for waste facilities, limits on construction of dams, etc.

Rivers Management & Protection Program (RSA 483)

- Rivers are nominated by local groups
- DES reviews nomination and makes recommendation to Legislature
- Legislature designates rivers into RMPP
- As of May 2000, 13 rivers designated
- Protections afforded to each river in RMPP
- Local advisory committee established

Instream Flow Rules (RSA 483:9-c)

- Work on Flow Rules began in 1990
- DES advised by RMAC
- Draft rules in 1994, 1995, 1996 & 1999
- Extensive public outreach (more than 50 presentations to interested parties)
- Applies only to designated rivers

Applicability

- Consumptive use of a designated river
 - Withdrawal minus Return Flow
 - Wells/surface withdrawals within 500 feet
 - Unless no hydraulic connection
 - Credit for downstream return flow
 - If no adverse impact to bypass reach
 - Hydro facilities - FERC licensed and FERC exempt
 - Except Run – of - River

Hydroelectric Facilities

- FERC licensed facilities covered when existing license expires
- FERC exempt facilities covered 25 years from issuance of exemption or when power contract expires, whichever is first
- Exempt if strictly Run – of – River with no other water diversion
- Minimum release = USF&W Aquatic Base Flow



Consumptive Use Limitations

- Consumptive Use = Withdrawal - Return
- Trigger Flows
 - Phase 1: Seasonal Q60
 - Aggregate consumptive use limit 4% of Q60
 - Withdrawals shared among Basin AWUs
 - Phase 2: Seasonal Q80
 - Aggregate consumptive use limit 2% of Q80
 - Withdrawals shared among Basin AWUs
 - Phase 3: Seasonal Q90
 - AWUs must cease consumptive use



Seasons

- Summer is June 1 through October 31
- Fall is November 1 through December 31
- Winter is January 1 through March 15
- Spring is March 16 through May 31



Issuance of Orders

- When estimated watershed (11 digit HUC) daily flow has been \leq the watershed trigger flow for 4 days
- 10 day duration, with re-issuance on 10th day based on watershed flow
- Lifted if watershed flow $\geq 1.5x$ trigger for 4 days
- Reporting required within 15 days after event
- IF AWUs install their own gage, they can take water during an order when flow is above the trigger

Rule Phase-in

- REQUIREMENTS DON'T TAKE EFFECT, except for reporting, for:
 - 4 years for AWUs without approved conservation Measures.
 - 7 years for AWUs with approved conservation Measures.



Public Water Supply Emergencies

- Commissioner determines, per RSA 483:9-c
- During phase III orders
- Only for public water suppliers (PWS)
- Two types of Emergency
 - When “immediate withdrawal” required:
 - Withdrawal for “standby storage”
- 15 years to meet phase III requirements, with approved emergency withdrawal plan

Types of Public Water Supply Emergency

When “immediate withdrawal” required:

- For fire or “essential domestic water supply”
- Withdraw without further approval
- Report the withdrawal
- Withdrawal for “standby storage”
 - Reservoir storage to maintain day tank levels
 - Approved emergency withdrawal plan
 - Event-specific emergency determination
 - Written request
 - Request must be in accordance with approved plan

Conservation Exemptions

- AWUs that implement conservation can be exempt from phase I and II orders
- Approved water conservation plan
 - Based on conservation effort
 - Or based on documented decrease in water use

Process for Establishing Trigger Flows

- DES publishes “proposed trigger flows”
 - Done already and on web (USGS did it for us)
- Hearings for each designated river
 - Notice to public and specified organizations
 - Written and oral testimony
 - Reasons why trigger flows should be different
 - Information for DES to use
- Process for reconsideration

Fiscal Impact

- Estimated frequency and duration for “events” at Q60,80,90,95,98 have been computed for 34 gages and posted on web
- AWU water use for past 5 years from water user database
- Estimated storage or alternate supply quantity for each AWU (52 AWUs) based on historical use

Fiscal Impact Statement Request

- Format prescribed by JLCAR rules
- Costs and Benefits (in \$)
 - Total
 - State General Fund
 - State Special Funds
 - Political Subdivisions
 - Citizens
 - Independently Owned Businesses

Costs

- Estimated costs for storage or wells
 - Storage Ponds from recent engineering estimates supplied by Loon Mountain
 - Storage Tanks from tank manufacturers
 - Wells from in-house estimates
- Capital cost estimates to Affected Water Users are between \$25M and \$49M, or \$1.7-\$3.3M/year over 15 years

Benefits

- Benefits to the integrity of river system ecological health are not measured in \$
 - A major factor not captured in the FIS request
- Benefits to humans – Not easily quantifiable
 - Recreation
 - Tourism
 - Quality of Life
- Acre-feet of water conserved annually x estimated recreation/ tourism value of water from literature
- Estimated recreation/tourism benefits to citizens are \$130,000/year

Rulemaking Next Steps

- Draft Rules and FIS request posted on web
- <http://www.des.state.nh.us/rivers/instream/>
- Pre-rulemaking public hearing
 - DES auditorium Thursday December 21st?
 - Information session AM
 - Public hearing PM
 - Specific written testimony encouraged

